



ARE YOU ONE IN A MILLION?

Unintuitive Statistics

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25/11/2023

4

HOW DID I (NOT) KNOW?

$$P(W) = 1/3$$

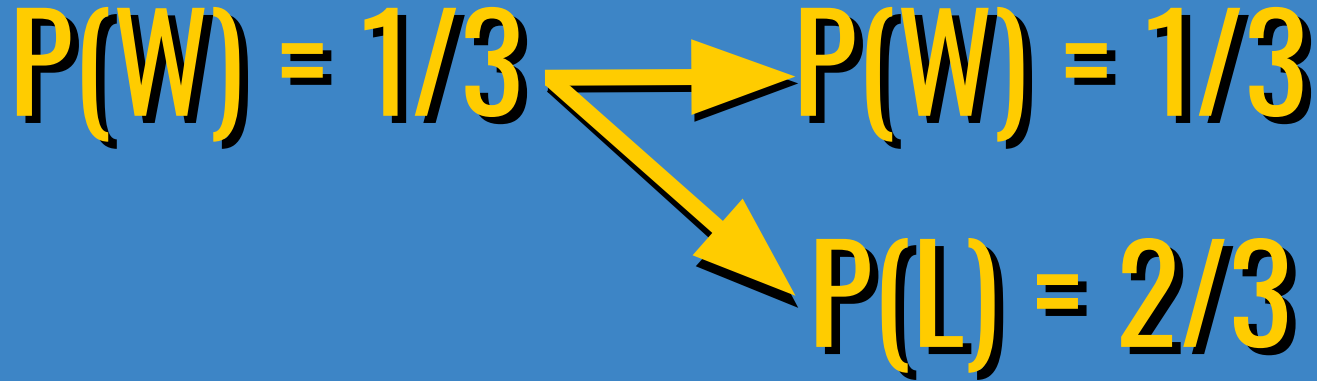
$$P(L) = 2/3$$

HOW DID I (NOT) KNOW?

$$P(W) = 1/3$$

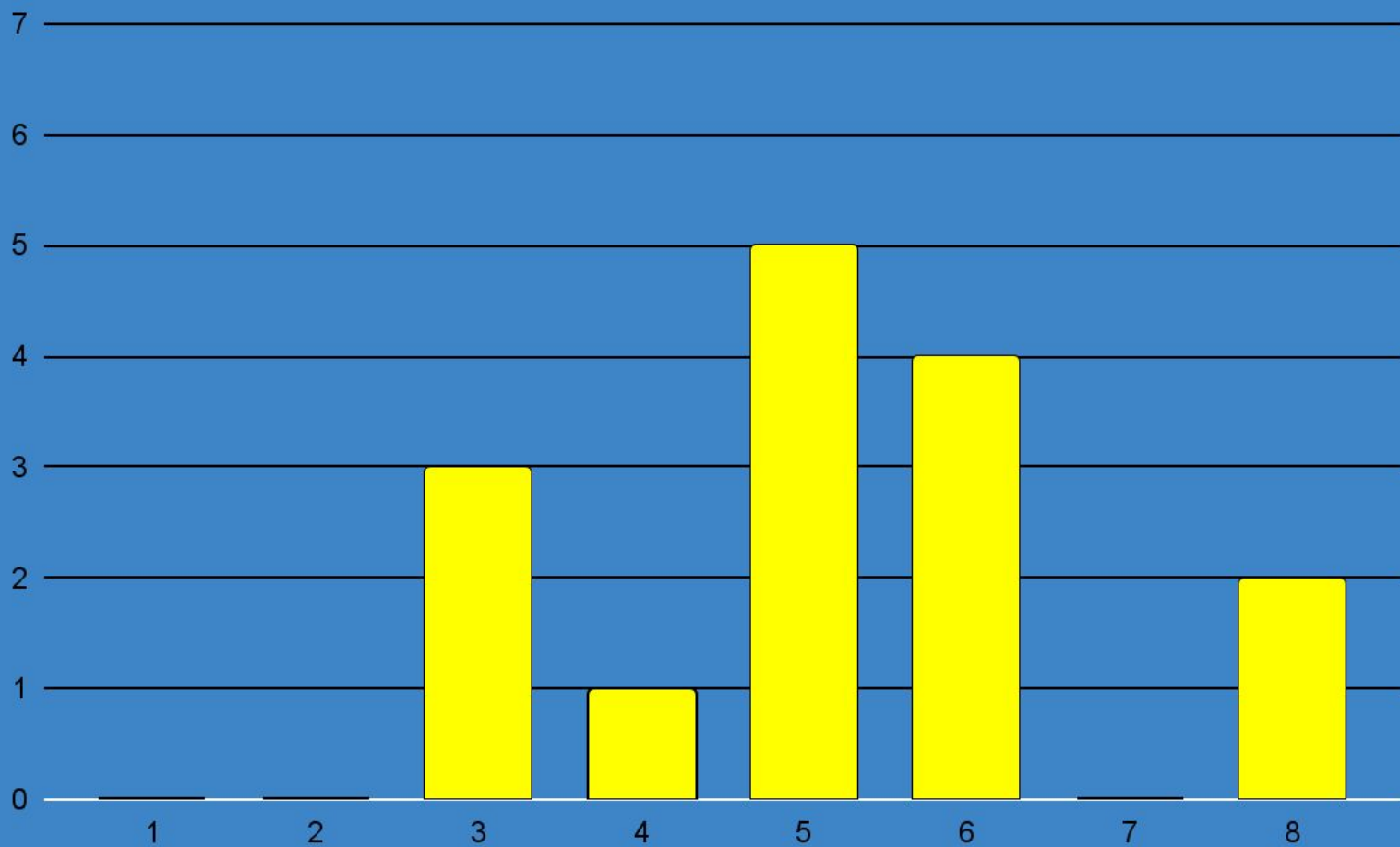
$$P(L) = 2/3$$

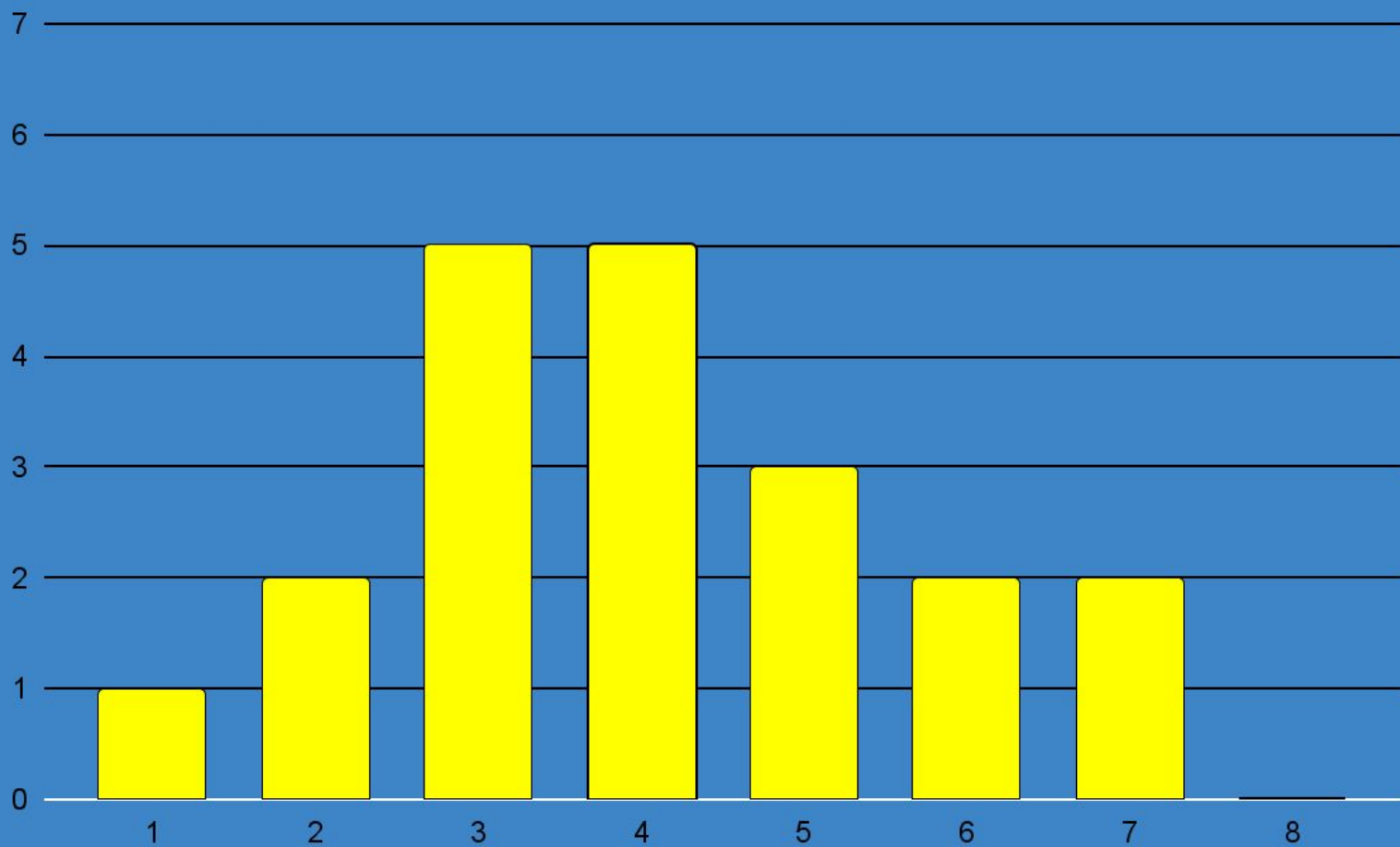
HOW DID I (NOT) KNOW?



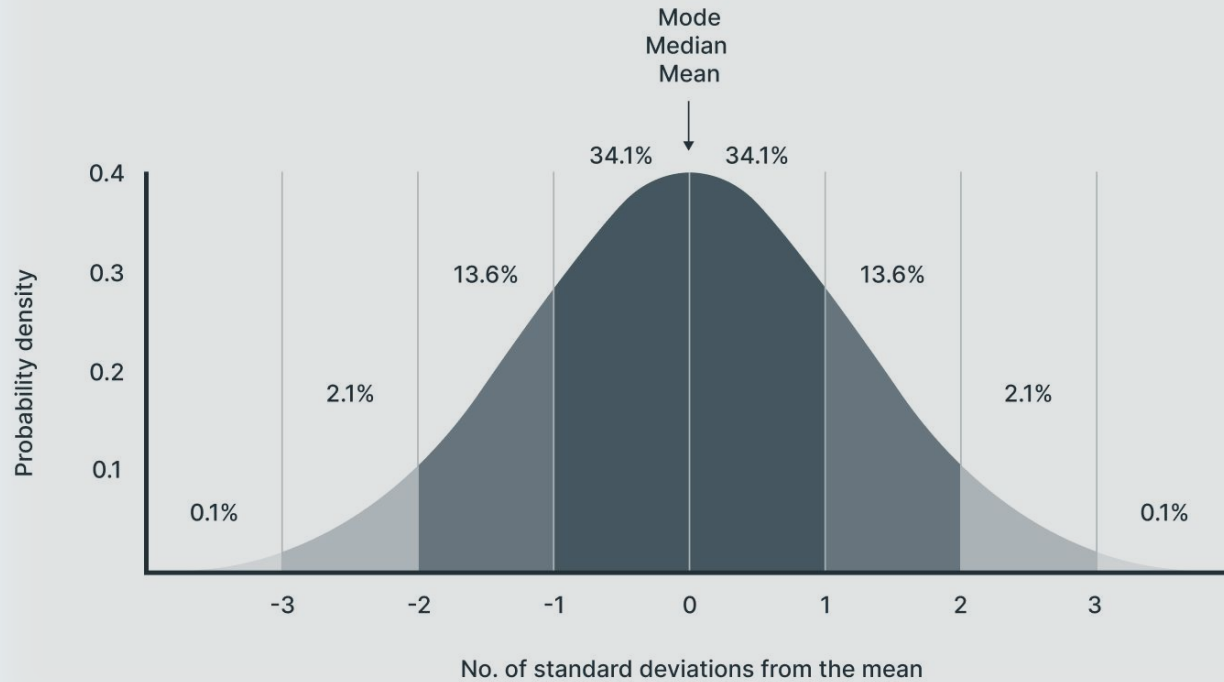
HOW DID I (NOT) KNOW?

60 → 20 → 7 → 2 → 1





Standard normal distribution



STATISTICS IN SCIENCE

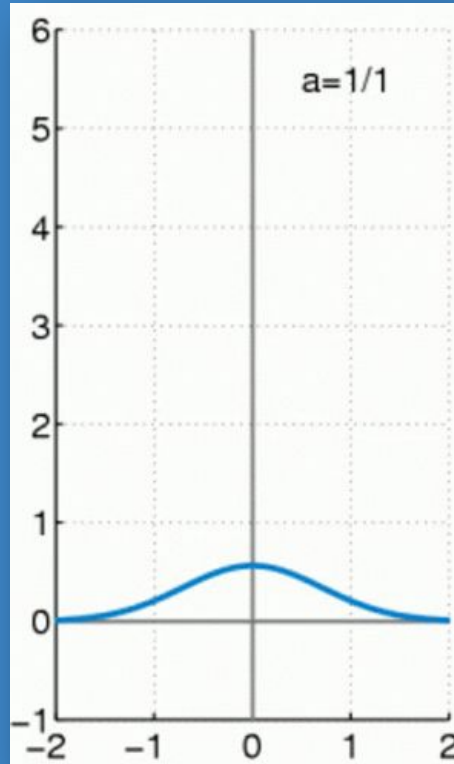
5 σ rule

STATISTICS IN SCIENCE

5 σ rule

0.00006%

STATISTICS IN SCIENCE



STATISTICS IS ABOUT INFORMATION



STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is red.

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is red.

$1/26$

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is not a number.

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is not a number.
 $1/16$

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is a ♥.

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is a ♥.

1/13

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is an A.

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is an A.

$1/4$

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

My card is red.

$1/26$

My card is not a number.

$1/16$

My card is a ♥.

$1/13$

My card is an A.

$1/4$

STATISTICS IS ABOUT INFORMATION

What is the probability that my card is the A♥?

THE POWER OF INFORMATION

THE POWER OF INFORMATION



THE POWER OF INFORMATION



THE POWER OF INFORMATION



THE POWER OF INFORMATION



33%



33%



33%

THE POWER OF INFORMATION



33%



66%

THE POWER OF INFORMATION



33%



66%